

Work Order ID 92067

92067

135/145

Item ID: 647.1602

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Doubler Assembly

Start Date: 22/10/2012 Start Qty: 6.00

6

Cust Item ID:

Required Date: 05/11/2012 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan: MCS

Date: 12-10-22 Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
647.1600	N/C								
110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									
120		0.00							
120									
Small Fab	Memo	0.00							
Small Fab	1- Assemble nutplate as per dwg								
130	QC5- Inspect part completeness to step on W/O	0.00							
130									
QC	Memo	0.00							
Quality Control									

13-4-22

13-4-22

DAS 18 13/04/22

6

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Operator <input type="checkbox"/>									
Material <input type="checkbox"/>									
Setup <input type="checkbox"/>									
Other <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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Work Order ID 92067

92067

Page 2

October-22-12 3:17:07 PM

Item ID: 647.1602

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: Doubler Assembly

Stop *NS2*

Start Date: 22/10/2012 Start Qty: 6.00

6

Cust Item ID:

Required Date: 05/11/2012 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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140 Identify as per dwg & Stock Location: ST 131A 0.00

140

Packaging

Memo

0.00

Packaging

***IDENTIFY AS PER APICAL MPP-120 BY STAMPING THE P# AND
REV***

6x

SP
13-4-23

150 QC21- Final Inspection - Work Order Release 0.00

150

QC

Memo

0.00

Quality Control

13/4/24

mk

13-4-23

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>						
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector			
Doc/Data <input type="checkbox"/>												
Equip/Tooling <input type="checkbox"/>												
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Material <input type="checkbox"/>												
Setup <input type="checkbox"/>												
Other <input type="checkbox"/>												
Process <input type="checkbox"/>												
Supplier <input type="checkbox"/>												
Training <input type="checkbox"/>												
Unapproved <input type="checkbox"/>												
FAULT CATEGORY												
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other	

Picklist Print

October-22-12 3:17:12 PM

Page 1

Work Order ID: 92067

92067

Parent Item: 647.1602

647 1602

Parent Item Name: Doubler Assembly

Start Date: 22/10/2012

Required Date: 05/11/2012

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP REV:A 12.10.04 NEW ISSUE DD VERF:JFS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
647.1613		Manufactured	No				Each	0.0000		6			
647 1613				92069					**	6		13-4-22	
Doubler													
MS21059-3		Purchased	No				Each	250.0000		24			
MS21059-3									**				
Nut Plate													
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div>													
				ST316				250					
				123022				50					
				123301				200		24		13-4-22	
CCR264SS3-04		Purchased	No				Each	646.0000		48			
CCR264SS3-04									**				
RIVET													
<div> <div>Location</div> <div>Loc Qty</div> <div>Loc Code</div> </div>													
				ST327				200					
				123352				200					
				ST331				446					
				17997				446					

CCR 264SS 3-3

123265

10

13-4-22

See Attached

124259

38

EMAIL

NCR: Yes / No

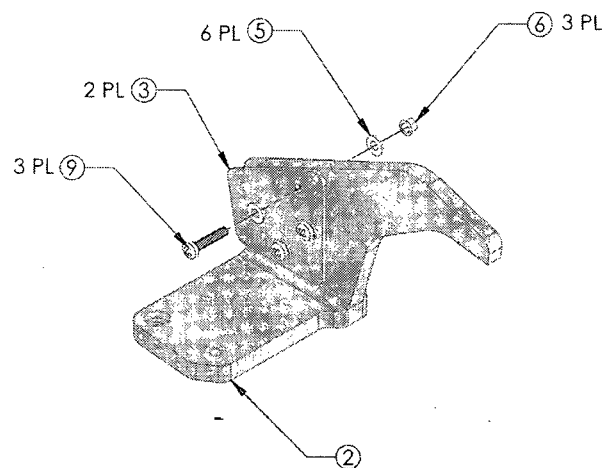
WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

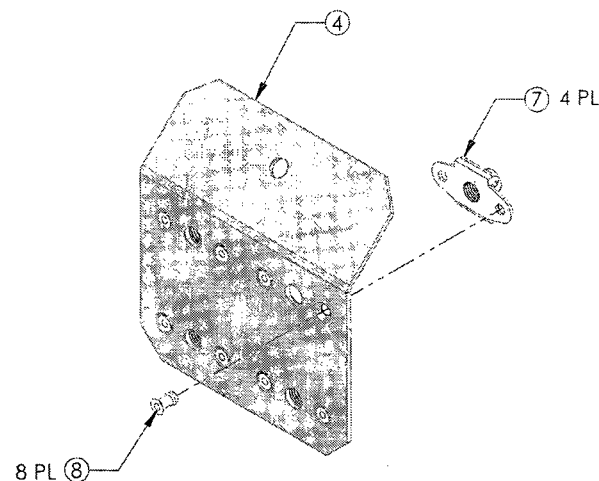
QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>						
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector			
Doc/Data <input type="checkbox"/>												
Equip/Tooling <input type="checkbox"/>												
Operator <input type="checkbox"/>												
Material <input type="checkbox"/>												
Setup <input type="checkbox"/>												
Other <input type="checkbox"/>												
Process <input type="checkbox"/>												
Supplier <input type="checkbox"/>												
Training <input type="checkbox"/>												
Unapproved <input type="checkbox"/>												
FAULT CATEGORY												
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other _____ _____ _____ _____	

1. MATERIAL: ALUMINUM 7075-T651 AMS-QQ-A-250/12
2. MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4
3. FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK, CARDINAL 4860 50 PRETREATMENT PRIMER PRIME IAW MIL-P-23377 J TYPE I CLASS N
4. DEBURR AND BREAK ALL SHARP EDGES
5. IDENTIFY IAW MPP-120



647.1601 SHOWN EXPLODED



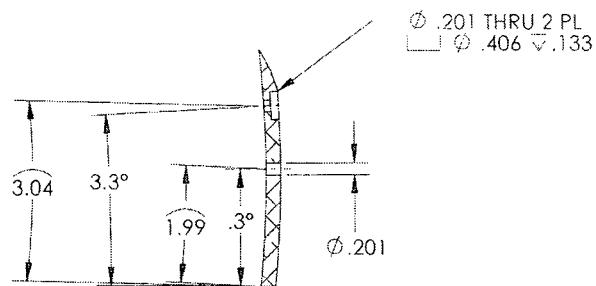
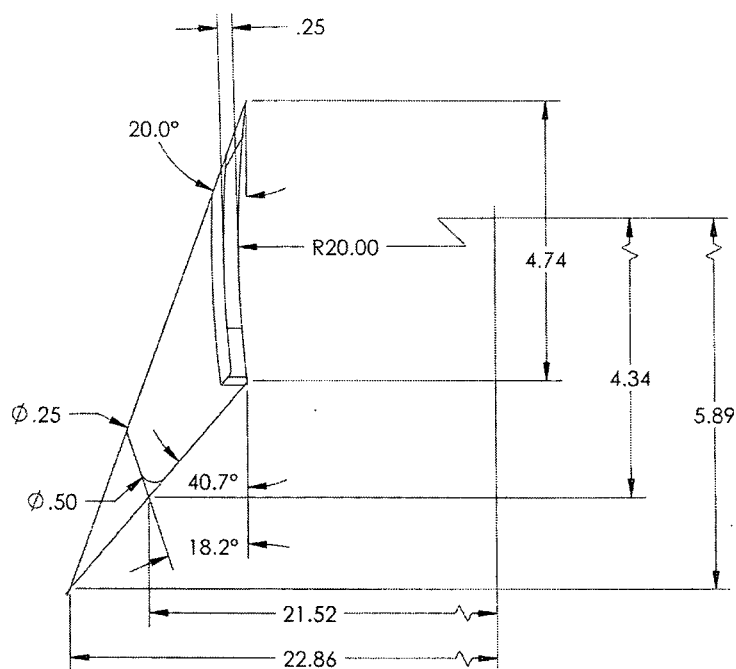
647.1602 SHOWN EXPLODED

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED
SUBJECT TO AMENDMENTS
WITHOUT NOTICE
WORK ORDER
NO. 92067

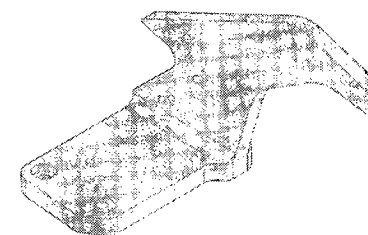
NO. 92067 ML5
12-10-22

	3	9	601.2989	SCREW	14521099-0012	
	8	9	601.2980	NUT/PLATE RIVET	100P26432-0-04	
	4	7	601.1900	NUT/PLATE	14521909-0	
	3	6	601.2973	LOCKNUT	14521942-08	
	6	5	601.2764	WASHER	14521149F4332P	
	1	4	547.1613	DOUBLER		
	2	3	547.1612	SPLICE PLATE		
	1	2	547.1611	WIPER DEFLECTOR, AFT		
		1	547.1610	WIPER DEFLECTOR, FWD		
	X		547.1602	DOUB:ER ASSY		
	X		547.1601	WIPER DEFLECTOR ASSY, AFT		
1402	1501	FIND #	PART #	DESCRIPTION	MATL	SPEC.
QTY				PARTS LIST		
NEXT ASSY (S)		OPERATING DATE: 10-10-05 DRAWN BY: J. HANSEN CHECKED BY: J. HANSEN DESIGNED BY: J. HANSEN APPROVED BY: J. HANSEN CONTACT NO:				
647.1300		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300				
		WIPER DEFLECTOR ASSY				
		SHEET 1 OF 1 SCALE: NONE				

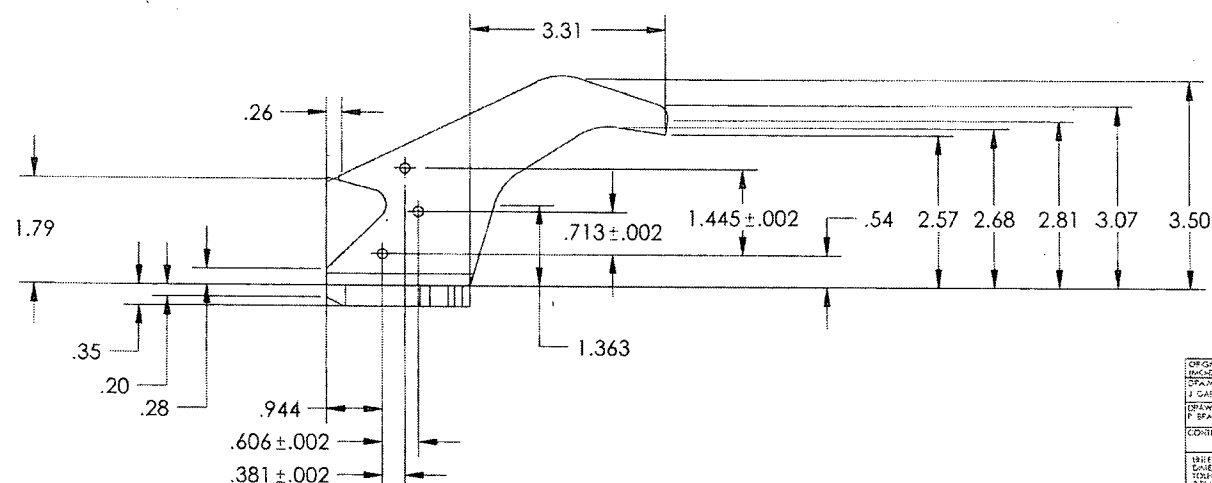
Diagram of a T-section beam with dimensions: top flange width 2.00, web height 2.02, and bottom flange width .28. The web is labeled R.20 and 2 PL.

[illegible][illegible]

92067



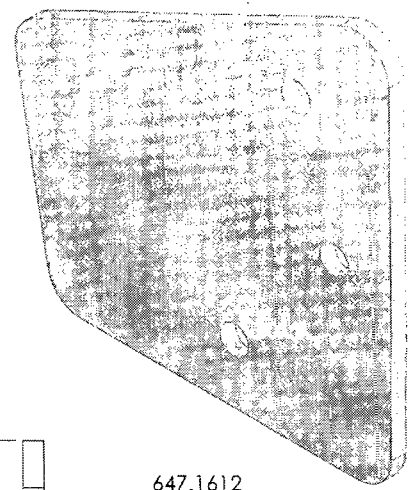
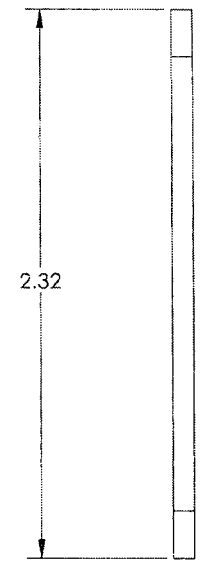
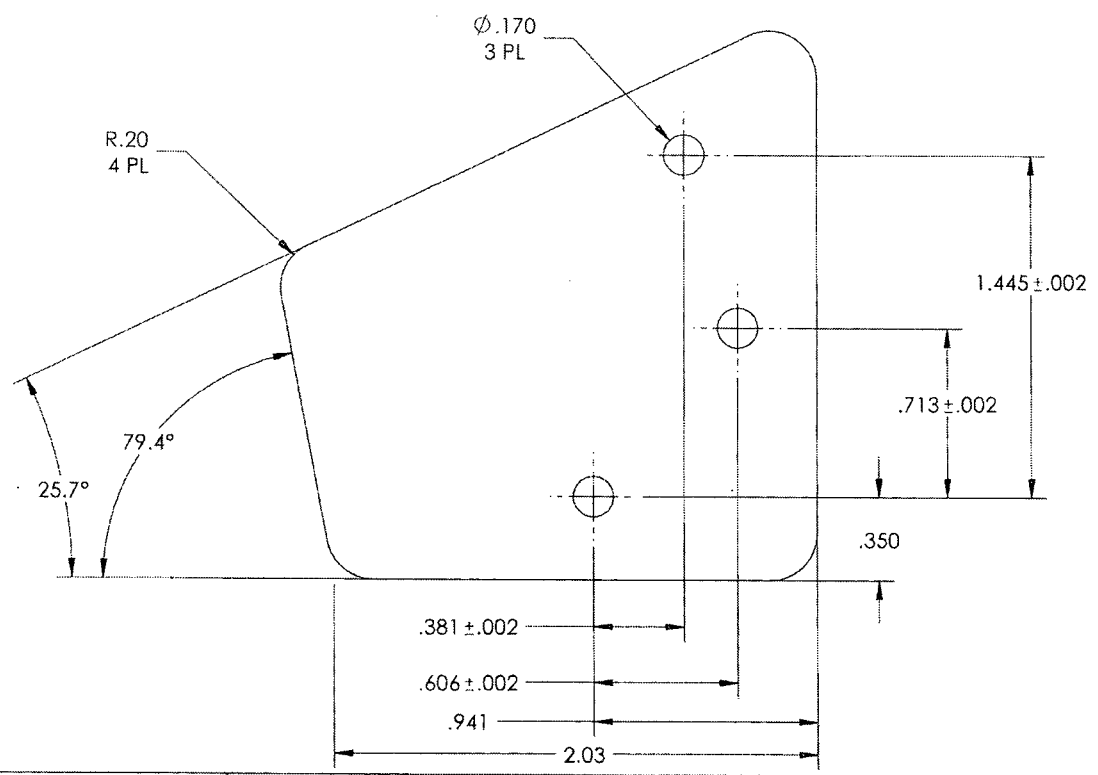
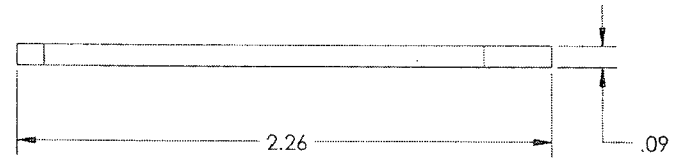
4/C3

[illegible]

92067

ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE IN INCHES
FRACTIONS SHALL BE IN 16THS OF AN INCH
DECIMALS SHALL BE TO 3 PLACES
TOLERANCES UNLESS OTHERWISE SPECIFIED ARE:
FRACTIONS: ±.005
DECIMALS: ±.002

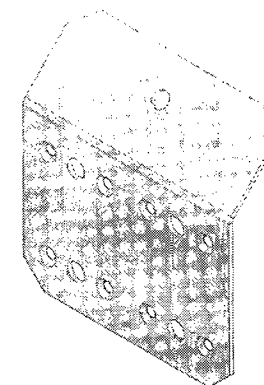
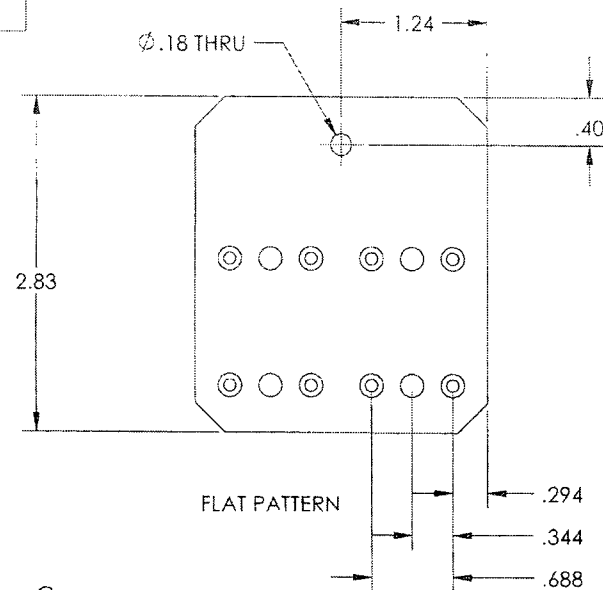
A
B
C
D



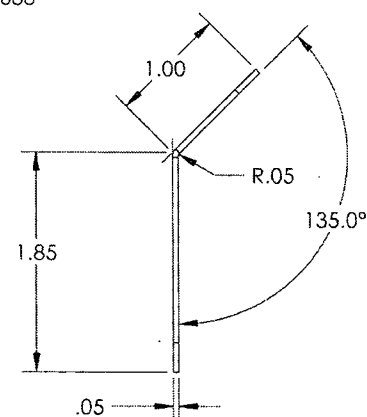
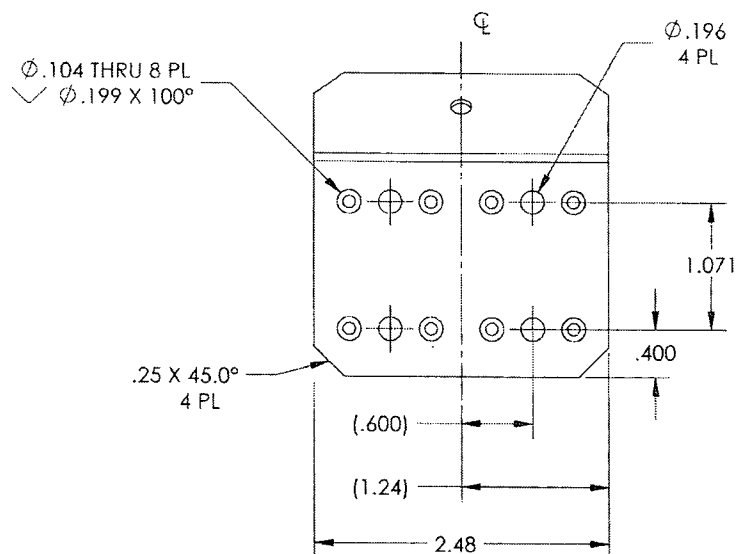
647.1612

ORIGINAL DATE: 08/10/00		APICAL INDUSTRIES	
DRAWN BY: CHERIEP		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: BPA/CO		OCEANSIDE, CA 92056-3512 (760) 724-5300	
CUSTOMER: BPP/STAL		WIPER DEFLECTOR ASSY	
CONTRACTING:		SCALE: NONE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS: ±.005 DECIMALS: ±.002 ANGLES: ±.5°		REV: 6	REV: N/C
CAGE CODE: 071A26		647.1600	
DWG NO:		SHEET 3 OF 6	

THE "OFFICIAL" VERSION OF THIS STORY IS: THE COLLE PROFESSOR, A
 10 IN A. J. STIMP AND ASSOCIATES, INC. IN A "BRIEF" WITHOUT
 THE "OFFICIAL" VERSION OF THE "OFFICIAL" VERSION



647.1613



ORIGINAL DATE (INVOICE DATE) ON-10-08	<h1>APICAL INDUSTRIES</h1>		
DEPARTMENT CUSTOMER	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300		
DRAWING APPROVAL P. #140	<h2>WIPER DEFLECTOR ASSY</h2>		
CONTRACT NO.			
DIESET COMPARE PREPARED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1. FRACTIONS DECIMALS 2. FRACTIONS DECIMALS 3. FRACTIONS DECIMALS	QTY 3	QUOTE CODE 07M16	DWG NO 647.1600
	SCALE: NONE	SHEET 4 OF 4	

Jean-Luc Menard

From: Alex Quan <aquan@apicalindustries.com>
Sent: April-18-13 11:34 AM
To: Dave Barker; Jean-Luc Menard; Pablo Bravo
Subject: RE: 647.1602 RIVET LENGHT

JL, you are right. They should be -03 rivets.

Alex

From: Dave Barker [<mailto:DBarker@dartaero.com>]
Sent: Thursday, April 18, 2013 8:24 AM
To: Jean-Luc Menard; Pablo Bravo; 'Alex Quan' (aquan@apicalindustries.com)
Subject: FW: 647.1602 RIVET LENGHT

JL – Pablo is out of the office, I've added Alex to the email. He should be able to confirm.

Thanks,

Dave

From: Jean-Luc Menard [<mailto:jmenard@dartaero.com>]
Sent: Thursday, April 18, 2013 5:12 AM
To: Pablo Bravo; 'David Barker'
Cc: Eric Downing
Subject: 647.1602 RIVET LENGHT

Hi Pablo/Dave,

We have started assembling the nutplates on the 647.1602 .

The dwg currently calls for CCR264SS3-04 that is on the right in the picture, on the left is a -04.

Think we should go for the -03.

Let me know what think, if you agree, I will issue a ECR.

Thx ,

JL